California Independent
System Operator

Summer 2007 Supply and Demand Operational Outlook

Assembly Utilities & Commerce Committee

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California ISO

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Introduction and Overview

- The CAISO annually prepares a Summer Operational Assessment.
  - Incorporates historical load and resource parameters.
  - Near-term load and resource changes.
- Assessment to highlight:
  - Reasonable range of probable operating conditions.
  - Probabilities of meeting key operating reserve parameters.
- Probability analysis methodology adopted for 2007.
- Analysis performed on CAISO control area, SP26 and NP26 sub-regions.

Review of Summer 2006

Demand

- 2006 peak load weather conditions exceed previous 31 years (of CAISO 32-year weather database).
- The CAISO experienced an all time peak of 50,270 MW
- Forecasting models were tested and found to be accurate based on temperatures experienced.

Supply

- Entered 2006 summer with a 24.6% forecasted planning reserve.
- CAISO managed through the peak without having to shed load.

  Due to:
  - Superb execution of 2006 Summer preparation plans by all
  - High Planning Reserve
  - Resource Adequacy (RA) forward procurement process
  - Record supply availability
  - Team work between agencies

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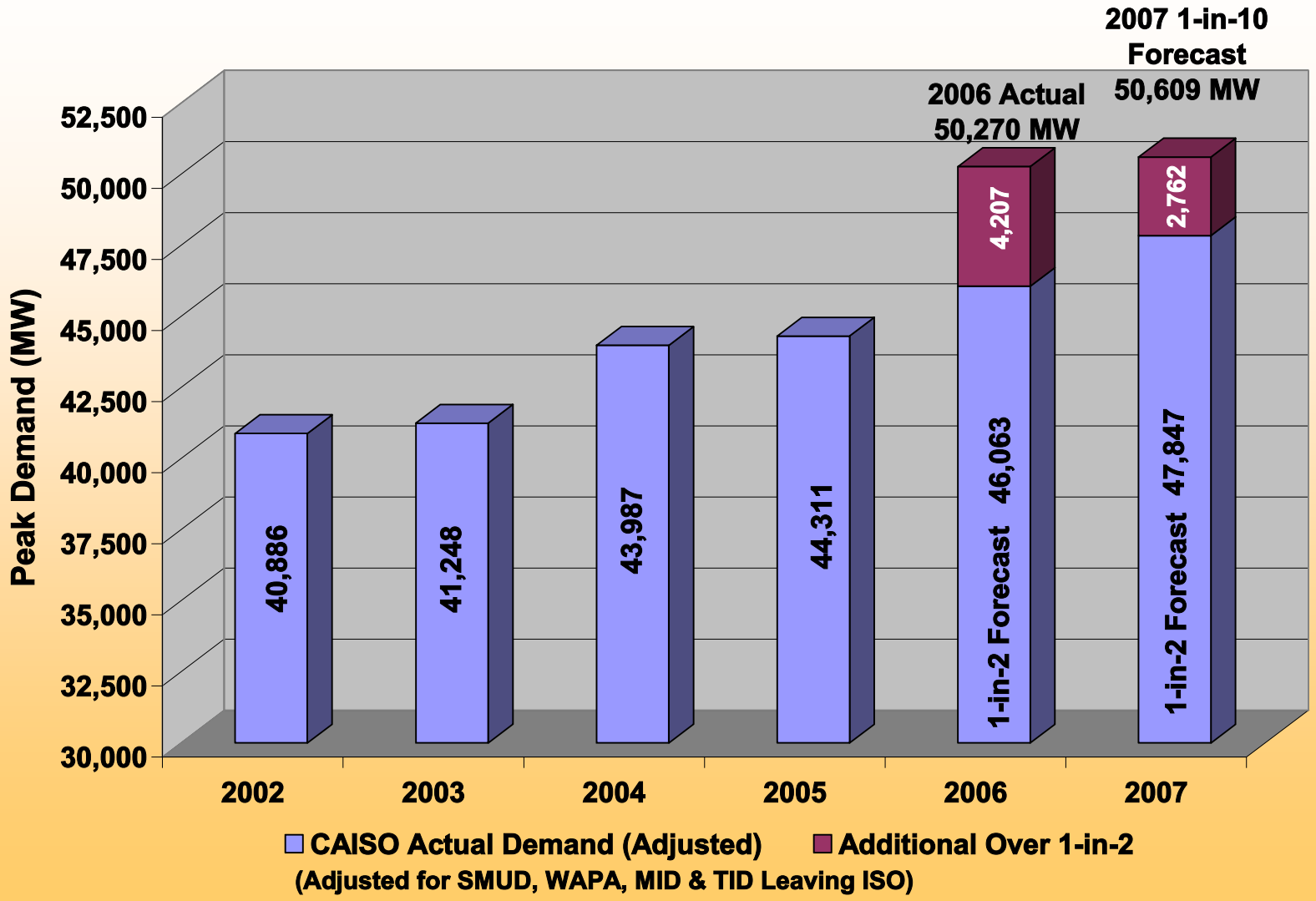
Load Overview

CAISO Historical & Forecast Peak Demand



2007 Resource Overview

Generation

- CAISO generation additions are approximately 700 MW.
- California hydro conditions are below normal YTD.

Imports

- System import capability for 2007 is unchanged from 2006.

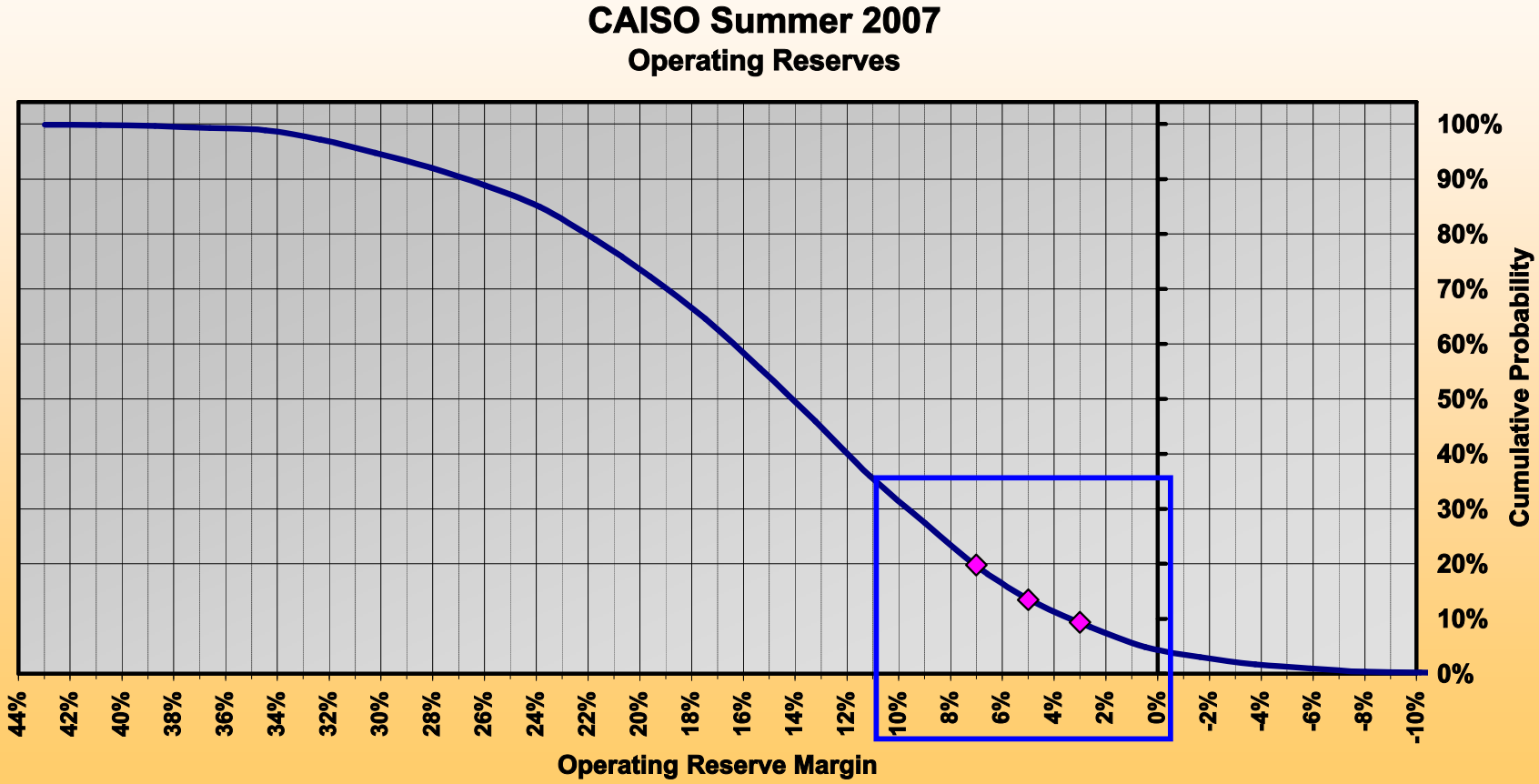
Demand Response (DR) and Interruptible Programs

- Approximately 230 MW added since summer 2006 (adjusted).

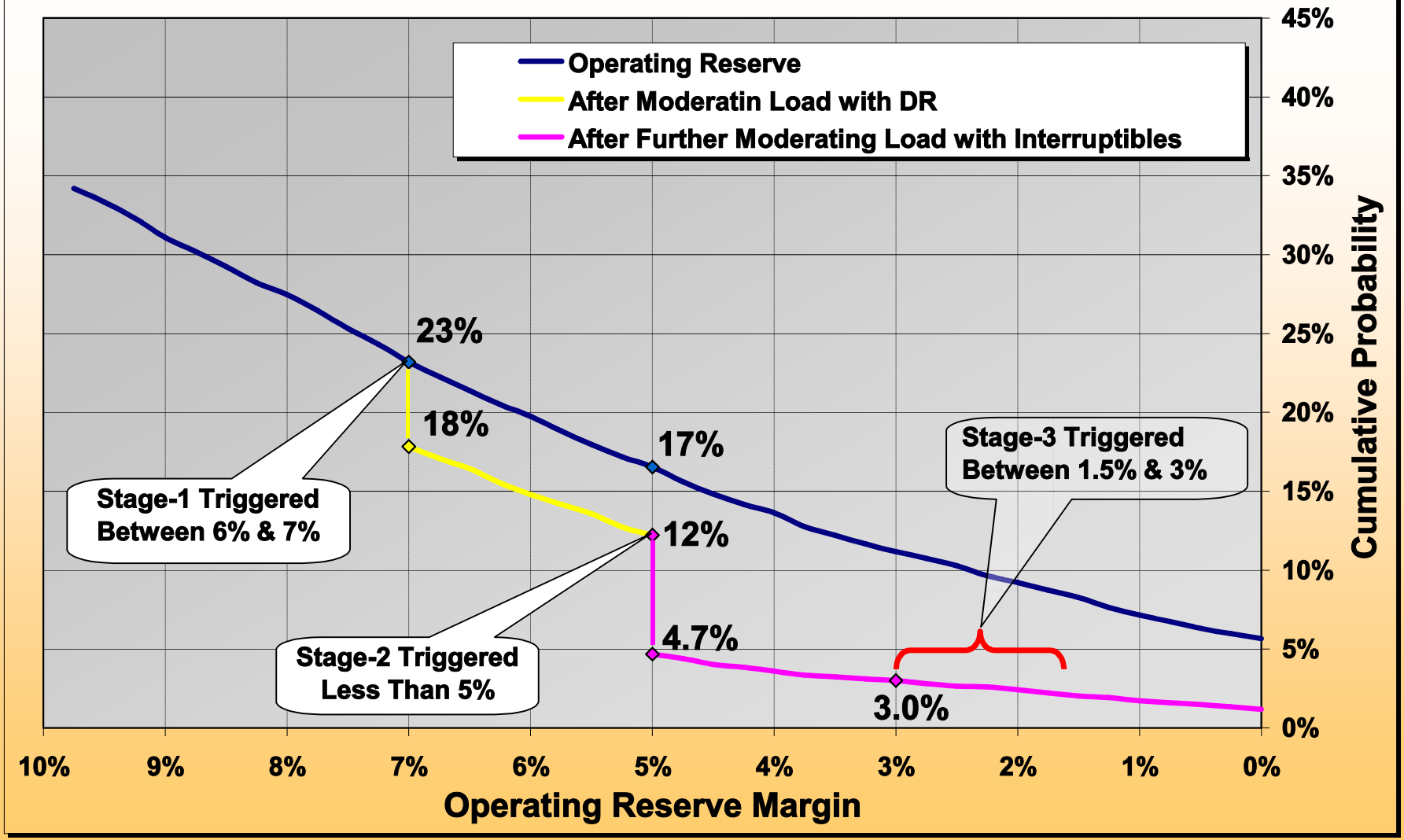
Net 930 MW Impact approximately 1-years load growth.

Overview of Probability Analysis

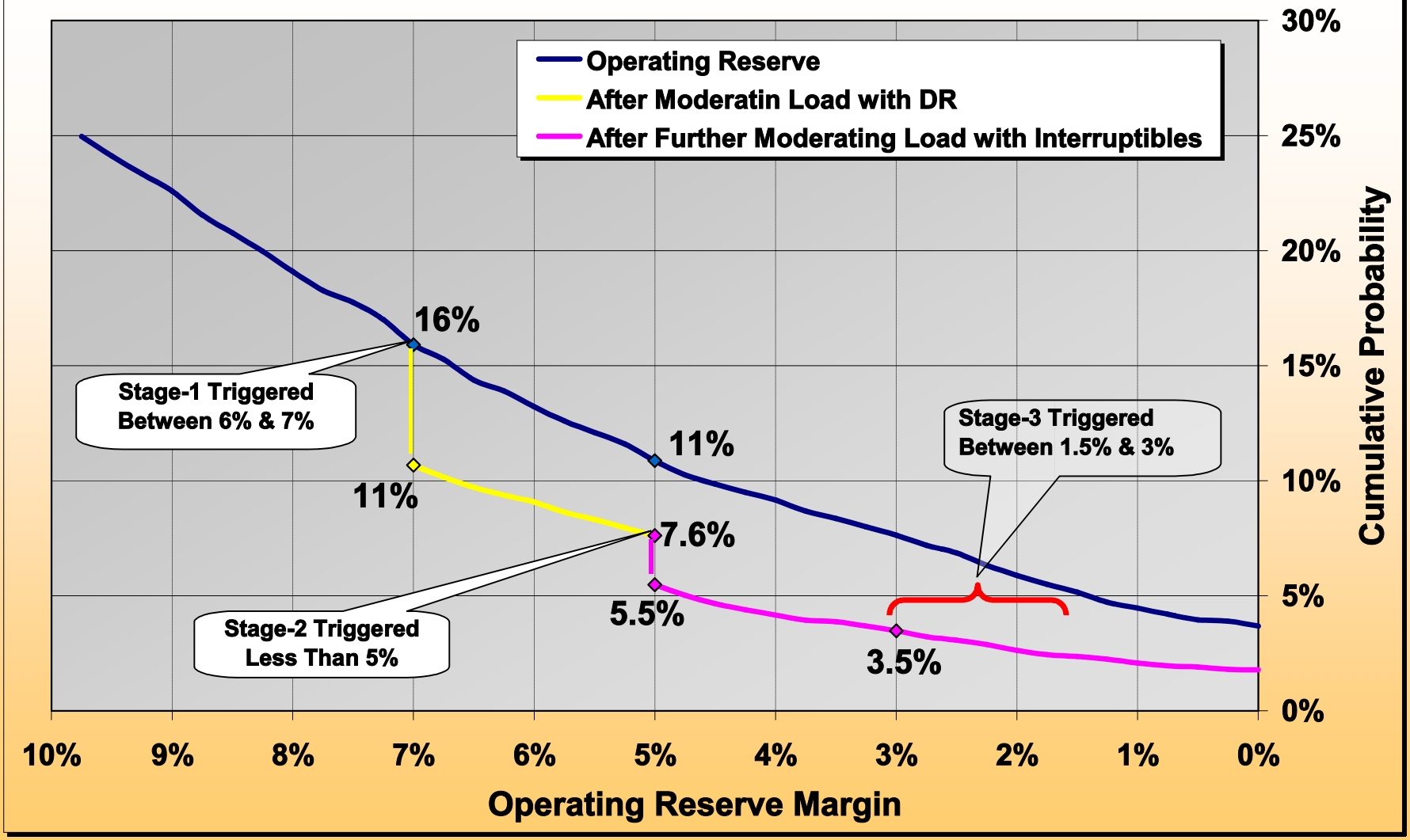
- Includes variability of demand, generation & transmission outages
- Performed for 3 Areas – CAISO and SP26 & NP26 zones
- Determines probability of entering into emergency operating conditions



CAISO SP26 Summer 2007 Operating Reserves



CAISO NP26 Summer 2007 Operating Reserve



Conclusions

- **The amount of risk associated with Summer 2007 operation of the Grid is similar to that of Summer 2006.**
- **The risk of having to shed firm load, is similar in CAISO, SP26 & NP26, and remains a concern under extreme high load and/or adverse supply conditions.**
- **The CAISO is counting on:**
  - **Continued success of the Resource Adequacy programs**
  - **Generation additions**
  - **Continuing increases in DR and interruptible programs**
  - **Summer preparation efforts to manage adverse conditions**
- **Availability of imports and *Conservation* will continue to be an important factor to help meet demand.**

Summer Preparedness Actions

- Continue performing engineering studies to identify trouble spots and develop operating tools and procedures to remedy them.
- Engage stakeholders concerning reserve margin issues through proceedings such as the Long Term Procurement Process (LTPP).
- Coordinate with statewide Flex Your Power NOW! program..
- Complete & quantify transmission upgrades before summer peak.
- Meet with utilities, generators and WECC control areas to discuss supply and demand outlook and unit readiness.
- Complete summer workshops to prepare ISO and utility dispatchers for summer peak conditions.
- Assess utility procurement plans to meet Resource Adequacy requirements.
- Participate in WECC and NERC regional demand and supply assessments to determine excess & deficiencies in neighboring control areas.